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Commercial Banks and the problem of Liquidity

TWO CHANGES HAVE OCCURRED in the commercial banking system during the postwar period which have far-reaching importance for bank liquidity. First, banks have divested themselves of $32 billion of readily salable Treasury securities—largely short-term issues—and have increased their loan portfolios by $65 billion. Whereas, at the end of World War II, Treasury securities comprised approximately 75 per cent of bank earning assets, loans now dominate bank portfolios. It should be noted, furthermore, that the present bank loan portfolio is likely to show a much larger proportion of term loans, consumer loans, and real estate loans than has been typical of the past. Second, the rising level of interest rates during the past three years, with its inverse effect upon bond prices, has left many banks holding securities having market values below either par or the price paid. These two developments undoubtedly have tended to diminish the exceedingly high liquidity of commercial banks a decade ago.

The influence that changes in market value of securities may exert on the liquidity of these assets is subject to misunderstanding, however. Likewise, it is possibly misleading to assume that loans, because they are not generally salable in the open market, provide no liquidity to the banking system. The discussion which follows is designed to point out the distinction between the concept of liquidity as applied to shiftability of assets, such as Treasury bonds, and as applied to an institution such as a commercial bank. The discussion also focuses attention on the measure of liquidity furnished commercial banks through the continuous flow of repayments from loan portfolios, in contrast to the more frequently considered salability of securities.

What is Liquidity?

The term liquidity is used in various ways and its meaning differs according to these uses. Broadly, these uses can be separated into two categories. Liquidity may refer to the shiftability characteristic of various types of *assets* or *claims to wealth*. Alternatively, liquidity may be used to refer to a particular characteristic of *business firms*. While the meanings of liquidity in these two uses are related, it can be shown readily that they are not identical and that the distinction between them has important implications for commercial banking.

● *Liquidity of Assets.* The liquidity of assets may be said to be measured by their convertibility to money. This also can be designated their "shiftability." More precisely, it is measured by the time required to convert the asset into cash and the spread, or range, of prices within which the transaction may reasonably be expected to occur. The shorter the time period needed to effect the exchange and the

smaller the price range, the greater the shiftability of the asset. Money itself, of course, is the measure against which other types of assets are compared.

The time necessary to exchange an article of wealth for money will depend upon the nature of the market for the asset and, if it is debt, the time duration of the contract. Some markets, such as the organized security exchanges, are designed to facilitate rapid sales of particular kinds of wealth claims. Bid and asked prices are generally not widely separated, and the prospective seller is able to exchange his asset for money at a price close to that anticipated, after a review of the current market and within a relatively short time. Other markets, such as the market for specialized types of real estate, may provide relatively little shiftability. Considerable time may elapse before a buyer is found who is willing to pay a price within the range indicated by real estate appraisers, and the range of such appraisals is likely to be wide relative to the range for such items of wealth as listed securities.

Because liquidity of assets is a quality of convertibility to money, an asset may possess liquidity not only by reason of its salability—the ability to shift ownership to another holder—but also, in the case of debt, by its maturity date. Thus, short-term debts, other things being equal, generally possess greater liquidity than longer-term debts. The holder of short-term debt may or may not be able to obtain cash by shifting his debt to the market prior to maturity, but regardless of this he has a commitment from the issuer to exchange the debt for cash at an early date. The degree of liquidity characterizing various near-term debts, however, again may depend upon the shiftability of other assets held by the debtor. This becomes particularly pertinent in connection with that application of liquidity theory to bank loans known as the real bills doctrine. According to this principle, short-term loans extended to business for the purpose of acquiring inventory possess a self-liquidating quality. This principle rests fundamentally upon the expectation that the goods purchased by the loan will be sold by the date the loan matures.

● *Liquidity vs. Price Change.* For analytical purposes, the question of shiftability of an asset may be set apart from changes in price of the asset. Appreciation and depreciation in value can occur independently from changes in the salability of an article of wealth. An increase or decrease might occur, for example, in the price of Treasury bonds, yet the holder of these bonds may be able to convert his bonds into cash with the same ease and certainty as before the price movement occurred. Sometimes the owner of an asset may have a reservation price (perhaps par or the price he paid) and feel reluctant to dispose of his holdings below this level. Though such a condition is sometimes known as being "frozen in," it does not represent an absence of shiftability unless the decline in bond prices has reacted on the market in such a way as to widen the spread between bid and asked prices or to cause a reduction in breadth and depth of the market. Such an impairment might accompany a price change, particularly if the change is very sudden and abrupt, but it should be distinguished from the depreciation of price itself.

Suppose that one bank acquired a given bond issue at a two-point discount while another bank later found it necessary to pay par for the same issue, but that both banks carry the issue on their books at the price actually paid. In the event that the market price of such a bond again dropped to 98, the bank carrying the bond at par might be said to be "frozen" into this part of its portfolio, implying that the asset had lost some of its former liquidity. Yet the same asset carried on the books of the first bank at 98 would not have similarly lost liquidity. Obviously, identical assets, exemplified here by bonds, cannot

possess differing degrees of liquidity at a given time. The shiftability of an asset does not vary among holders, but instead is determined for all holders by the facility with which the asset can be converted to cash. Nevertheless, the term liquidity is commonly used in describing the implications of a decline in prices of fixed income securities. The decline in bond prices last year is frequently cited as an important cause of reduced bank liquidity. Is it possible for an article of wealth to retain its liquidity and yet for the holder of this wealth to suffer a reduction of liquidity? The answer to this question requires recognition of the fact that liquidity of a firm necessarily refers to the maturity schedule of its liabilities, as well as the liquidity characteristics of its assets.

● *Liquidity as Applied to a Bank.* The liquidity status of a firm is measured by the quantitative and qualitative aspects of both its assets and its debts. Thus, a bank might improve its liquidity status either by changing the composition of assets held in the direction of greater liquidity, or by reducing the amount or extending the maturity of its indebtedness. Use is commonly made of this concept in the case of nonfinancial firms, whereby a comparison is drawn between the value of those assets which in the normal course of events will be exchanged for cash within one year and the volume of liabilities with under-one-year maturities.

Unlike the liquidity of a particular item of wealth, the liquidity of a firm is very importantly concerned with changes in market value. A bank, for instance, may find that its liquidity has been radically altered by change in the current value of an asset relative to the liabilities against which it is held. For the investor, this is the true significance of a decline in price of marketable securities below their book value. It is not that the securities have become less readily salable, but rather that the amount of cash obtainable from sale of such assets relative to the known volume of liabilities has altered the firm's liquidity.

It is also desirable to point out the error in the notion that liquidity of the banking system can be assured by having each bank hold "salable" assets. While an individual bank is able to maintain liquidity by such means, a major segment of the banking system could not meet demands for cash by selling securities. Such assets are shiftable only to the extent that there are buyers prepared to give up cash in exchange for noncash assets. The individual bank may successfully obtain cash by inducing other banks or customers of other banks to acquire noncash assets; in short, that is, by drawing funds from outside that bank. However, if all or a major part of the banking system attempted to do the same thing, a similar inflow of outside funds could not be expected, unless the Federal Reserve System were willing to supply new funds in exchange for the noncash assets offered by the banking system. In the absence of Federal Reserve purchases, commercial banks would be dependent upon nonbank buyers—individuals and businesses. Such purchases would result in a decrease in the aggregate volume of bank deposits equal to the market value of securities sold, and excess reserves of the banks accordingly would be increased only by a fraction of the deposit contraction. Thus, the liquidity of the banking system depends upon the shiftability of assets to the monetary authority, and therefore upon the willingness of the monetary authority to exchange new reserves for the type of assets held by commercial banks.

Growth of Loan Volume and Bank Liquidity

The change in composition of bank earning assets since 1945 has been fundamental, and undeniably it has generated important changes in liquidity of banks. However, cursory consideration of the nature of asset holdings may lead too readily to the conclusion that banks today possess very little liquidity, if attention

is directed only to the volume of securities—particularly Treasury issues—maturing in less than a year. Such a view overlooks the important source of liquidity provided by the greatly enlarged volume of loans. While Government security holdings of all commercial banks contracted $32 billion in the postwar decade, loans expanded $65 billion. Far from being a completely illiquid asset, bank loan portfolios provide a continuous flow of liquid funds to meet needs arising out of deposit losses and new loan demands.

According to a recent survey of business loans at member banks, about two thirds of bank loans to business have maturities under one year. This, of course, is the traditional type of credit extended by banks—short-term funds for production purposes. The liquidity of these loans, it should be noted, depends not upon their salability or shiftability to another lender, but rather upon successful marketing of the product being financed. While this may seem to be an entirely different form of liquidity from that described earlier in connection with Treasury securities, there is one important similarity. Liquidity of securities is achieved through the current marketability of the debt instrument itself, while in the case of short-term business loans, the liquidity again depends upon marketability, but of the underlying goods rather than of the debt instrument.

Comprehensive information is not available on the volume of business loan repayments by time periods, but assuming an average maturity of six months—which probably is too long—it would appear that repayments during the average month could be conservatively estimated at 15-18 per cent of outstanding business loans. For all commercial banks, this would mean that roughly $6 billion becomes available each month for reinvestment, including renewals.

Business loans with a maturity of over one year comprise an estimated one third of the total commercial and industrial credits outstanding. Ordinarily, the long-term loan is liquidated not by the sale of goods already in existence—as is the traditional short-term loan—but from the sale of goods or services which are expected to be produced during the period of the loan. Thus, such longer-term credits clearly depend for liquidity upon anticipated income of the borrower. The loan is liquidated in instalments drawn from earnings of the plant or equipment which serves as collateral for the loan. The final necessary condition for the liquidity of either long-term or short-term business loans is, of course, the flow of receipts from public consumption of the goods and services financed by these credits.

Thousands of banks in the United States have undertaken to provide consumer credit during the postwar period, and the volume of short- and intermediate-term instalment credit outstanding at commercial banks has increased more than fifteenfold since the end of 1945. Such credit represents about one sixth of total loan expansion in the postwar period, and amounted to nearly one seventh of outstanding loan volume at the end of 1956. The liquidity of these credits is one step further removed from the concept of salability represented by marketable securities. Repayments on this class of loans come not from anticipated sale of output, as in the case of term loans, but from future earnings of the borrower, quite unrelated to the purpose of the loan. The liquidity of residential real estate loans, the volume of which has increased relatively faster in the postwar period than either total earning assets or total loans, rests upon the same consideration. These two groups of instalment loans to consumers, ranging from under-one-year to over-20-year maturities, now form more than one sixth of commercial bank earning assets.

The large current volume of instalment loans—short-, intermediate-, and long-term—

with their very important amortization features, provides a substantial and regular flow of funds to the banks. During 1956, for example, short- and intermediate-term instalment credit provided commercial banks an average of more than $1 billion per month of repayments. Liquidations for the year are estimated to have exceeded $13 billion, or more than the average total amount of such credit outstanding in that period. The residential mortgage portfolio, while following a slower liquidation schedule, provided an estimated $4 billion of repayments to commercial banks. This was 25 per cent of the average volume of loans outstanding during the year. Even allowing for the portion of such repayments that are tied directly to new extensions—as when a borrower repays an outstanding note prior to maturity but simultaneously secures a new, larger loan—the annual inflow of cash liquidations is impressively large.

These figures point up the fact that bank loan portfolios do not consist of completely illiquid assets, but are capable of contributing a substantial cash flow to meet needed adjustments. Moreover, the flow of funds from instalment repayments has little seasonality. The payments are scheduled on a level month-to-month basis and therefore provide a firm basis for plans to meet anticipated needs. On the other hand, the very scheduled nature of such liquidations means that they are not capable of performing the same function as an asset immediately salable in the market.

Deposit Liability and Bank Liquidity

As noted earlier, liquidity of firms, as contrasted with liquidity of assets, must take into account not only the type and quantity of assets held but also the time flow of expected demands of creditors. The probable outflow of funds used to meet liabilities must be balanced by the expected flow of cash to the firm.

The banking system, as contrasted with an individual bank, experiences deposit fluctuations chiefly in connection with changes in aggregate volume of loans and investments. The system of banks is not subject to inflow and outflow of deposits as is an individual bank, for interbank shifts of funds tend to be mutually offsetting. A bank deposit can exist only as a liability of a bank somewhere within the banking system. The substantial variation over time of aggregate deposits of the banks is related, therefore, chiefly to creation and extinction of deposits originating in the bank lending-investing process, not through the transfer of balances into or away from the banking system. Gold flows and currency requirements may be responsible for minor changes in deposit volume, but major deposit changes depend upon net growth or contraction of loans and investments. Stability of aggregate deposits, therefore, other than in a period of financial panic, rests upon stability in earning assets of the banking system, and control over the volume of deposits resides largely in the volume of credit extended by commercial banks.

Moreover, contraction of aggregate bank deposits which traditionally has accompanied declining business activity and dwindling loan volume may be substantially alleviated through public policy measures. Present monetary, fiscal, and debt management practices are designed to generate complementary movements between bank loan portfolios and bank holdings of Treasury securities. A tax structure geared strongly to income payments automatically tends to produce budget deficits in periods of declining activity and consequent expansion of debt. Supplementing this increase in outstanding Government debt, the tailoring of debt refunding issues to conform with bank maturity preferences tends to channel more of the existing debt into banks. To insure adequate bank capacity to absorb such issues, monetary policy in a recessionary period is aimed at maintaining ease in bank reserve positions.

It might also be noted that while loans are a relatively more important part of bank assets today than in 1945, they remain a less important share than in 1929 and, therefore, a less important potential source of deposit instability. In 1929, for example, loans were approximately two thirds of total bank credit outstanding, compared with one half today. Hence, a given percentage decline in loan volume today would be expected to have a lesser impact on deposit volume.

What is true for the banking system, however, is not equally true for the individual bank. Deposit variation in a single bank, and consequently liquidity needs of the single bank, depend upon a number of additional factors. Unlike other business concerns, banks have a very large volume of liabilities possessing an indeterminate maturity. While an industrial firm is able to determine with reasonable precision the amount of liabilities which fall due within any stated period of time, a large part of a bank's liabilities—its demand deposits—may be withdrawn at the pleasure of the creditor. Even in the case of time deposits, banks generally have relinquished the right of prior notice.

This does not mean, of course, that a bank is normally faced with simultaneous withdrawal by all of its depositors. Unless the bank were able to depend upon its depositors to refrain from making net withdrawals of a major portion of balances, it obviously would need to hold cash assets almost exclusively. On the other hand, if a bank could be certain that it would never be subjected to wholesale withdrawals, liquidity requirements would be substantially lower. The distribution of maturities of earning assets could be determined on the basis of risk and yield. Even if deposit liabilities, though perhaps varying in amount, behaved in a predictable manner, the liquidity aspect of bank portfolio policy would be far simpler. Assets could then be arranged to conform with predetermined patterns of deposit change, and banks would find it less necessary to provide deep liquidity cushions. Loan demands which cannot be anticipated accurately impose an additional liquidity requirement upon banks, for the ability to accommodate customer credit needs requires assets in a form which can be converted to cash. This consideration may be regarded as less critical than provision for deposit withdrawals in the sense that inability to meet loan demands would not force the bank to close its doors. Nevertheless, it cannot be disregarded, for management must recognize responsibility for maximizing earnings through taking advantage of sound loan opportunities.

Although mutually offsetting movements of individual deposit balances within a single bank eliminate much of the volatility in the bank's total deposit levels, there are, nevertheless, periodic and random influences which produce dominant inward or outward movements. Seasonal factors in economic activity, which are responsible for variation of around 5 per cent in aggregate demand deposits for the banking system, may exert a very strong influence on deposit levels at individual banks. Seasonal fluctuations are not equally distributed among banks in a system, and the relative change in deposits at all banks understates the magnitude for many individual institutions. Furthermore, seasonal deposit losses may be accompanied by seasonally larger loan demands. The business firm that has exceptionally large seasonal cash outlays is likely not only to draw upon its existing deposit balances but also to supplement these by bank borrowing.

A second general factor introducing instability in deposit movements is the existence of differential regional growth rates. The entire economy does not grow at a uniform rate, and the process of general growth and development may involve contraction for some communities. While some sections, such as the Southwest and Pacific Coast areas, have ex-

perienced rapid increases in population, income, and bank deposits in recent years, other regions have been subjected to long-term contractive tendencies.

Though general business cycle fluctuations permeate the economy very broadly, their impact, like that of seasonal factors and growth trends, is considerably greater on some communities, and consequently has unequal impact among banks. Employment and income fluctuations over the course of a business cycle differ widely among various industries, as do deposits and loan demands at associated banks. The community dependent upon a single industry, for example, or the predominantly agricultural area is likely to experience wider cyclical movement than the economically diversified region. Thus the susceptibility of the local economy to variation in the pace of activity is a factor in the liquidity needs of the individual bank.

In addition, a variety of random tendencies may introduce particular liquidity considerations for the individual bank. For example, Treasury tax and loan accounts could be a source of extensive short-run deposit movements, as swings from maximum to minimum are relatively great for these accounts. Similarly, large individual or business accounts may make the bank more vulnerable to large unanticipated withdrawals. The larger the number of depositors, for any given deposit total, the broader the distribution of withdrawal risk and the less the probability of an abnormal deposit movement.

Conclusions

The liquidity of banks and the banking system presents certain special problems not present in other forms of enterprise, because the principal type of bank obligation is payable on demand. To meet this inherent problem, banks historically have sought to protect themselves through the concentration of earning assets in short-dated, high-grade securities and short-term, self-liquidating business loans. Changing arrangements of economic life have, however, altered the type of credit which the community has sought from commercial banks. Business firms have found it necessary to borrow on longer term and consumers have become important users of bank credit in all maturity ranges.

For the individual bank, liquidity of earning assets has become increasingly dependent upon anticipated income of the borrower, rather than upon the shiftability of the debt instrument to another holder. Liquidation of business loans, loans on real estate, and consumer loans all rest upon the ability of the borrower to market his product or services and thereby obtain the income to meet his loan maturity. In the event of a severe depression with sharply declining prices, the volume of loan repayments might be expected to drop off substantially. Real estate loan repayments, and to a lesser extent automobile instalment loan repayments, might be particularly affected, as declines in value of collateral would tend to restrict "trading up" in these assets and the accompanying repayment of loans ahead of schedule. Thus, the liquidity of the banking system today rests strongly upon the continued flow of income to borrowers and consequently is closely related to continued high levels of employment and economic activity. Insofar as banks as a whole are concerned, complete liquidity through a shifting of assets to the market is impossible, regardless of whether portfolios consist of loans or securities. Widespread or general liquidation of noncash assets would be possible only through intercession of the monetary authority and the supplying of new reserves.

Business Failures

While 1956 was one of the most prosperous years in the Nation's history, many businesses found the path to prosperity a narrow one with numerous pitfalls. This is implied by business failure statistics, which show the number of failing commercial and industrial enterprises in 1956 climbing to 12,686, the highest number since 1940. Current liabilities of failing businesses also reached a postwar peak of $563 million. The combination of good business conditions and growing business failures is not peculiar to 1956, however. The postwar decade has featured an almost continuous expansion in traditional measures of economic accomplishment, yet numbers of business failures and liabilities involved have climbed with only temporary interruptions.

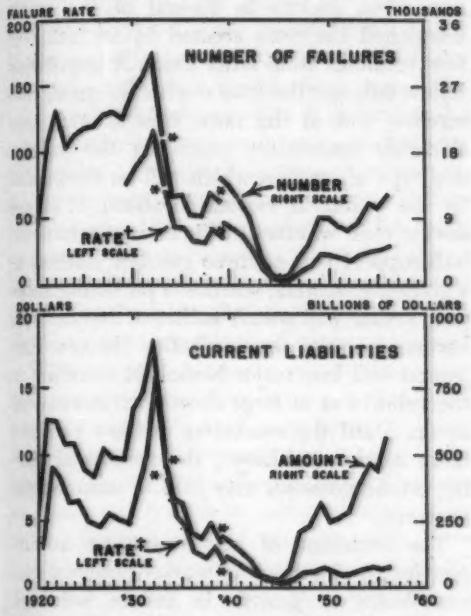
Rising failures are often regarded as an early warning of approaching difficulties, but an incautious assumption that they forecast an ensuing recession may be misleading. A variety of factors quite unrelated to cyclical weaknesses in the economy—such as the rate of formation of new firms, population movements, changes in the strength of competitive forces in particular industries, and changes in the structure of total output—are capable of producing variations in failure data. These factors play an important role in explaining postwar failure experience.

Certainly, business failures in the postwar years appear less disquieting in longer historical perspective. Failure numbers during most of the two decades preceding World War II were much higher, averaging more than 20,000 annually during the prosperous 1920's. Statistics on the total business population are not available prior to 1929, but the trend since that date indicates that today's number of operating enterprises is well above any previous figure. Thus, the failure rate—the number of commercial and industrial failures per 10,000 operating businesses—must have been far higher during the 1920's than presently, as it was throughout the ill-fated depression era.

In 1954-56, current liabilities of failing businesses approached levels characteristic of the 1920's, although remaining well under the swollen volume of the early 1930's. Long-term trends in liabilities, however, must be evaluated in relation to changes in the size of the economy and in the general price level. Long-run growth of gross national product, reflecting both expanding production and rising prices, has outstripped the secular advance of liabilities in business failures, so that current liabilities per $1,000 of GNP have been low in recent years in contrast with the two prewar decades.

While the long view of business failures is reassuring, even a surface inspection of postwar data reveals that increasing failures reflect more than mere expansion in the size of the economy. Failure numbers have risen more rapidly than the population of business enterprises, as the failure rate (the number of failures per 10,000 operating businesses) increased from 3.5 in 1946 to 29.8 in 1956. Cur-

BUSINESS FAILURES, 1920-56



*Change in coverage of failure statistics.

†Number of commercial and industrial failures per 10,000 operating businesses. The business population upon which this calculation is based includes certain types of activities for which failure statistics are not collected.

‡Current liabilities of failing businesses per $1,000 of GNP.

SOURCES: Failure statistics, Dun and Bradstreet, Inc.; business population, Department of Commerce; GNP, Department of Commerce, 1929-56, unofficial estimates for 1920-28, John W. Kendrick, published in *Economic Almanac*, National Industrial Conference Board.

rent liabilities per $1,000 of GNP increased from 32 cents to $1.36 during the same time span.

The Immediate Postwar Years

The number of businesses failing and their current liabilities dropped sharply from 1941 through 1945, reflecting the economic impact of war mobilization. An enormous expansion of income was accompanied by shortages of civilian goods, and sellers' markets abounded. The profitability of business enterprise was, moreover, determined to a larger extent by Government regulations and Government spending than by the usual market tests of efficiency. A declining business population also contributed to the smaller failure figures, as owners moved into defense production and military service. Entry rates—the formation of new businesses relative to the existing business population—were unusually low in 1942 and 1943, and it is among newly formed businesses that failure rates are highest.

Rising failures in the first few postwar years represent a return to more nearly normal economic conditions. The formation of new firms proceeded at an unusually rapid pace—nearly 1½ million new businesses were started in the three years 1946 through 1948. Sellers' markets became less prominent as production of civilian goods came into closer balance with civilian demands. Removal of wage and price controls restored to the market place its traditional function of allocating scarce resources.

Obviously, these factors became of decreasing importance in creating a rise in failures as time progressed. The excess of total demands for goods and services over available supplies was reversed in 1949, when a recession took place, although existing backlogs of demand for particular goods may not have been completely filled by that date. As early as 1948, the long-term relationship between numbers of firms and total real output was re-established. Since then, the annual rate of new firm formation has been substantially below the 1946-48 average.

Failures by Region

The years 1949 and 1954 were both periods of moderate recession in economic activity. With broadly similar economic conditions prevailing, it is interesting to note that numbers of failures were 20 per cent higher in 1954, while current liabilities of failing businesses were 50 per cent larger. This points to a con-

tinuing upward trend in failures which was concealed during the Korean War period when business profits were sustained at high levels under the auspices of rising Government expenditures and advancing prices.

The increase in current liabilities over this 5-year span (1949-54) was widely distributed geographically. Growth of failure numbers, on the other hand, was concentrated in the Pacific, Middle Atlantic, South Atlantic, and Mountain State areas. Six states mainly account for the upward trend in failure numbers in these regions: New York and New Jersey in the Middle Atlantic region; Florida in the South Atlantic area; Colorado and Arizona among the Mountain States; and California in the Pacific territory. Failure numbers in these six states were 2,395 higher in 1954 than in 1949, while in the remaining 42 states a decline of 555 was registered.

With the exception of New York, each of these six states enjoyed a rate of growth in personal income above the national average during the five years 1949 through 1954. In four of the six states—the exceptions are New York and New Jersey—population growth in the same period was far higher than the average for the entire country. And in New York and New Jersey, growth of the population over a somewhat longer time span (the 10 years beginning in 1946) was also larger than the national average. It seems clear that with the possible exception of New York, increasing failures in these particular states cannot properly be associated with adverse economic conditions, but were evidence of rapid economic and population growth and the opportunities this development afforded. Some part of the growth in failure numbers in New York, however, may be related to failures of textile and apparel manufacturers, who have been experiencing severe competitive pressures.

That growth in economic opportunities may lead to rising failure numbers seems paradoxical, although there are reasonable explanations of the apparent contradiction. Rapid population growth in several of the states mentioned has been created by an influx of new residents from other areas. A population inflow enlarges the total market for goods and services, but at the same time creates considerable uncertainty regarding the volume and type of services which will be demanded by the public at various locations. It is not always clear whether traffic on a certain street will support two or three gasoline stations at a given intersection, whether a particular shopping center will attract sufficient business for various specialty shops, whether the new consumers will buy major household durables in the suburbs or at large downtown stores, and so on. Until the marketing pattern becomes more nearly established, the process of testing public demands may lead to unsuccessful ventures.

The formation of new businesses accompanying an expansion in market potential also contributes to growth in failure numbers. Freedom of entry into the market permits the establishment of firms with inadequate managerial or technical abilities, insufficient capital funds, or other deficiencies, and the operation of reasonably competitive markets dictates the demise of those firms unable to demonstrate minimum standards of efficiency. High failure rates accompanying an advanced level of business starts may reflect the normal selection process of a competitive economy instead of basic market weaknesses.

Failures by Industry

Changes in the distribution of failures by industrial origin also shed some light on factors producing the upward trend since 1949. Comparing 1950-55 with the previous four years, all major industry divisions show a higher average number of failures per year. Growing failures in retail trade and in contract construction, however, were particularly prominent and geographically widespread.

From 1946 through 1949, these two activities accounted for 50.3 per cent of the total number of failures. In the 1950-55 period, the figure was 60.9 per cent. Numbers of failures in retail trade and construction were 1,712 higher in 1954 than in 1949, but failures in the other business groups combined were virtually unchanged. Current liabilities of failing retail trade and construction firms more than doubled the 1949 rate in 1954. In all other industries, the increase in liabilities was a little over 5 per cent. The latter increase was far smaller than the 1949 to 1954 expansion in total national output valued at current prices.

That enlarged economic opportunities may produce rising business failures is illustrated dramatically in the field of construction. Numbers of failures have increased in every year but one since 1946, although the total volume of construction outlays (after adjustment for price changes) has advanced roughly three times as much as real national output. In the ten years ending in 1955, some 680,000 new construction firms began operations, which is about three and one half times the number existing at the end of the war.

In contract construction, the establishment of a new firm is relatively easy compared with other classes of business activity. The sustaining turnover rate—the rate of turnover when the population of firms is stable—is far higher than for other major types of business. A shift in the business population toward industrial activities in which entry and exit rates are unusually high, such as construction, tends to swell the rate of business failures. Thus, it is of considerable significance to the failure trend that construction firms have risen from 6 per cent to more than 10 per cent of the total number of operating businesses in the postwar period.

Growing retail trade failures, on the other hand, are not so readily identifiable with unusual economic opportunities. Retail sales in dollars of constant value have risen somewhat less than real national output since the end of World War II, and retail stores today comprise a slightly smaller percentage of the total business population than in 1946. The entry rate among retail trade firms has also been lower than the average for all lines of activity.

Retail stores have, however, been subject to market conditions which may have contributed to the growth in failures. One of these is the increased price competition from the so-called "high volume-low profit" sellers, as public tastes have favored the expansion of retail firms providing fewer of the services traditionally supplied by retailers. Existing firms unable to make adjustments to the altered competitive conditions, as well as new firms attempting to capitalize on the change in public tastes, may have enlarged the failure numbers. Supporting this view is the fact that failures among furniture and appliance stores, where the "discount houses" have been particularly active, have increased more than for retail stores as a whole.

A second factor operating in the retail field is suggested by increasing mortalities in growing regions such as California and Florida. It was noted above that failure experience in these states may be partly related to the development of new shopping sites and market testing to determine the volume and type of goods and services consumers will purchase at various locations. A somewhat similar problem arises on a nationwide basis from the movement of population to the suburbs. Suburban growth is perhaps less likely to entail unusually rapid formation of new businesses, since suburban shops are frequently branches of downtown stores or new locations of existing firms, but the uncertainties associated with changing sites for consumer buying are not eliminated. It scarcely needs to be added that slowness of existing enterprises to adjust to the changing locational aspects of market structure would also contribute to rising failures.

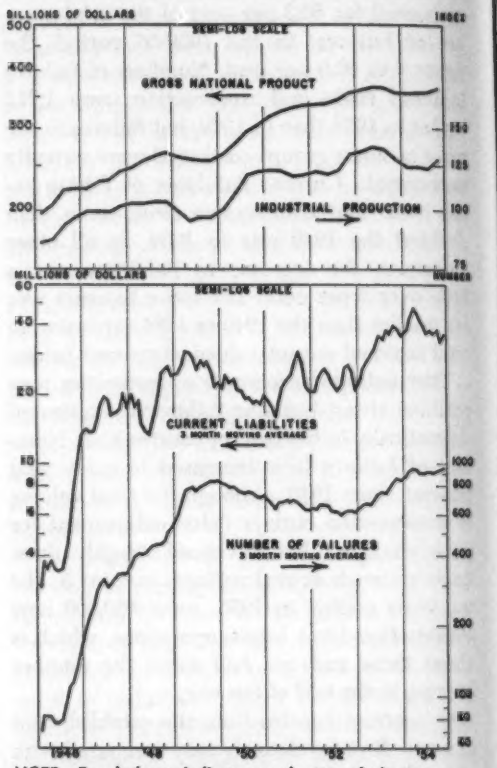
Failures as an Economic Indicator

Although business failures respond to a variety of influences not closely associated with the cyclical strength or weakness of the economy, failure data still may provide some clues to future changes in the rate of business activity. The following discussion of business failure statistics as leading economic indicators is confined to postwar experience, and it must be recognized that a thorough investigation of this question would need to encompass a much longer time span.

In the accompanying chart, seasonally adjusted figures for numbers of failures and current liabilities have been smoothed by a 3-month moving average. This was done to remove some of the erratic variations which remain after the seasonal adjustment process. Month-to-month movements in business failures are highly irregular, and allowance must be made in interpreting these data for random movements which are quickly reversed. It may be noted that the current liabilities series still contains fairly large erratic changes even after the smoothing process.

The business downturns beginning in late 1948 and in the latter half of 1953 followed a period of increase in the current liabilities of failing businesses. In both cases, current liabilities began rising about half a year prior to the onset of the recession, and the upswing was sufficiently large and prolonged to be distinguished from the erratic variations characteristic of the series. The behavior of liabilities less clearly anticipated recovery from the two postwar recessions, however. Liabilities began falling early in 1949 and again in the first part of 1954, but in neither case did the decline reach an appreciable magnitude until the recovery was well under way. Growing liabilities might have been misinterpreted as a portent of approaching recession in two cases—from mid-1946 to mid-1947, and again in 1951. In the latter year, private GNP did decline for a brief period, but rising

FAILURES AND ECONOMIC ACTIVITY, 1946-54



NOTE: Equal slopes indicate equal rates of change.
SOURCES: Failure statistics, Dun and Bradstreet, Inc.; GNP, Department of Commerce; Index of Industrial Production, Board of Governors of the Federal Reserve System.

purchases by the Federal Government provided a strong sustaining force.

The forecasting record of failure numbers during 1946-54 is less favorable, a fact which has been discovered in other studies extending over longer time periods. This suggests that failure numbers are more heavily influenced by special circumstances partly unrelated to the cyclical weakness or strength of the economy—changes in competitive conditions in certain industries, population movements, and so on. The postwar downturns were both preceded by rising failure numbers. The 1949 recession, however, followed a two and one

half year period of persistent growth in numbers of failures. Thus, the assumption that rising failure numbers indicate an approaching recession would have been correct in late 1948 but continuously incorrect for two years prior to that time. Recovery from these two recessions was in no way indicated by declining failure numbers; indeed, growth of failure numbers halted only with the upswing in production and employment.

It is not by coincidence that failure statistics from 1946-54 displayed a more bearish picture of economic conditions than was warranted, appearing to indicate deflationary pressures which did not materialize, and failing to give timely signals of recovery following the two postwar recessions. Factors not closely associated with the cyclical strength of the economy, but which still operate to produce an upward trend in failures, clearly tend to bias the failure data in this direction.

Failures in 1956

Rising failures in the current business boom began to develop in the second half of 1955. On a year-to-year basis, failure numbers in 1956 were up 16 per cent from 1955 and current liabilities advanced 25 per cent.

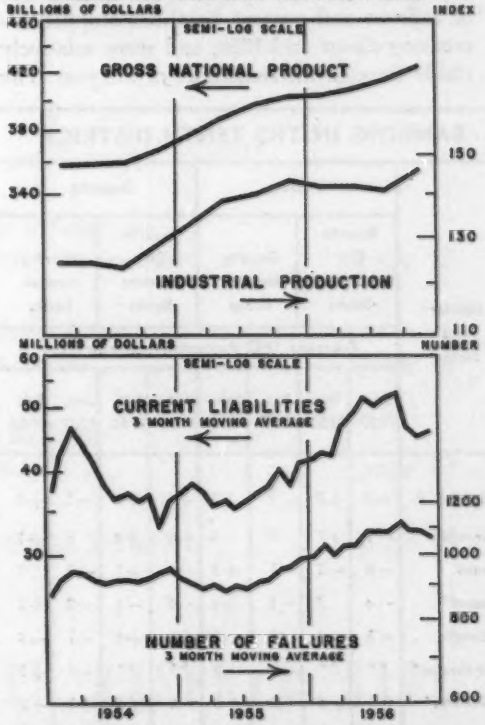
Looking at this growth of failure numbers by regional origin, it is found that the upward movement has been widespread geographically with each of the major regions of the country, except New England, participating in the increase. The 1955-56 expansion in failure numbers in the six states previously discussed was 8 per cent, compared to 26 per cent in the rest of the country.

Most of the increase in failure numbers during 1956 was in retail trade and construction, with these two industries contributing 64.4 per cent of the total as contrasted with 61.5 per cent in 1955. However, roughly comparable increases in current liabilities occurred in all major industry divisions, including firms in manufacturing and mining, wholesale trade, retail trade, construction, and commercial services.

It seems evident that recent failure experience cannot be identified entirely with the factors producing an upward trend in numbers and liabilities since 1949. The pattern of growth in failures has been somewhat different from that in earlier years. Moreover, the rise in failure numbers and liabilities between mid-1955 and mid-1956 was too abrupt to be attributed solely to longer-run forces.

Widely discussed soft spots in the economy during 1956 seem to be evidenced in the failure statistics. Current liabilities rose sharply among textile producers and manufacturers of lumber and building materials. Failures of

FAILURES AND ECONOMIC ACTIVITY, 1954-56



NOTE: Equal slopes indicate equal rates of change.
SOURCES: Failure statistics, Dun and Bradstreet, Inc.; GNP, Department of Commerce; Index of Industrial Production, Board of Governors of the Federal Reserve System.

automobile dealers increased. The figures for contract construction surely were related to the decline in housing starts and the reduced profitability of residential construction.

While it seems that recent failure experience has flashed warnings of soft spots in the economy, it is not evident that such signals imply an impending downturn. Failures among textile manufacturers, for example, probably reflect a long-run adjustment problem facing that industry, and may be devoid of cyclical implications. Difficulties presented to automobile dealers by declining sales and high inventories in 1956 may have been corrected by year end. Additional encouragement may be gained from the fact that after adjustment for seasonal changes, both numbers of failures and current liabilities stopped increasing about mid-1956, and were relatively stable through the remainder of the year. The monthly rate of current liabilities actually declined somewhat toward the close of the year. On a seasonally adjusted basis, both liabilities and numbers increased slightly in January 1957, although remaining below the peak monthly figure in 1956, but little significance can be attached to small changes in a single month.

Finally, it is worth repeating that current liabilities, a better business indicator than failure numbers, rose sharply in 1951 but a recession did not follow, as a slight decline in private demands for goods and services was overwhelmed by rising Government outlays. Government outlays are expected to rise in 1957, although by much less than the enormous increase in 1951, and this rise would tend to provide an offset for any retrenchment in demands originating in the private sector of the economy.

BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	February 1957 Percentage Change From							
	Jan. 1957	Feb. 1956	Jan. 1957	Feb. 1956	Jan. 1957	Feb. 1956	Jan. 1957	Feb. 1956
Tenth F. R. Dist.	−2	+2	†	+3	+1	+2	−1	+1
Colorado	−1	+7	†	−3	+6	+4	†	+1
Kansas	−6	−1	−1	+3	−2	+1	−3	†
Missouri*	−4	†	−1	+6	−5	−1	−2	+2
Nebraska	−3	−4	†	−3	+3	+2	−1	−1
New Mexico*	**	**	−2	+8	**	**	−2	+3
Oklahoma*	+1	+4	+2	+8	+5	+5	+1	+2
Wyoming	**	**	+2	+10	**	**	†	+5

*Tenth District portion only. **No reserve cities in this state.
†Less than 1 per cent.

PRICE INDEXES, UNITED STATES

Index	Feb. 1957	Jan. 1957	Feb. 1956
Consumer Price Index (1947-49=100)	118.7	118.2	114.6
Wholesale Price Index (1947-49=100)	117.0	116.9	112.4
Prices Rec'd by Farmers (1910-14=100)	234	238	227r
Prices Paid by Farmers (1910-14=100)	294	292	280

r Revised.

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales		*Value of Residential Building Permits	
	Percentage change—1957 from 1956					
	Feb.	Year to date	Feb.	Year to date	Feb.	Year to date
Tenth F. R. Dist.	+6	+8	−1	0	+1	−14
Denver	+13	+11	−3	−1	+9	−26
Wichita	+5	+10	−4	+4	−14	−35
Kansas City	+5	+7	−5†	−3†	+18‡	+14‡
Omaha	−5	−1	−2	−2	−4	−17
Okla. City	+5	+6	−4	−4	−12	−15
Tulsa	+7	+11	+14	+10	−50	−44

*City only. †Kansas City, Mo., only. ‡Kansas City, Mo., and Kans.